

DIATOMITE

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2013, production of diatomite was estimated at 770,000 tons with an estimated processed value of \$220 million, f.o.b. plant. Six companies produced diatomite at 10 mining areas and 9 processing facilities in California, Nevada, Oregon, and Washington. Diatomite is frequently used in filter aids, 56%; cement, 15%; fillers, 14%; absorbents, 13%; and less than 2% for other applications, including specialized pharmaceutical and biomedical uses. The unit value of diatomite varied widely in 2013, from approximately \$7.00 per ton for use as a lightweight aggregate in portland cement concrete to more than \$400 per ton for limited specialty markets, including art supplies, cosmetics, and DNA extraction.

<u>Salient Statistics—United States:</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013^e</u>
Production ¹	575	595	813	735	770
Imports for consumption	1	1	2	3	1
Exports	88	86	106	96	102
Consumption, apparent	488	510	709	642	669
Price, average value, dollars per ton, f.o.b. plant	255	299	269	286	286
Stocks, producer, yearend ^e	40	40	40	40	40
Employment, mine and plant, number ^e	670	660	660	660	660
Net import reliance ² as a percentage of apparent consumption	E	E	E	E	E

Recycling: None.

Import Sources (2009–12): Mexico, 35%; France, 31%; Italy, 11%; and others, 23%.

<u>Tariff:</u>	<u>Item</u>	<u>Number</u>	<u>Normal Trade Relations</u>
	Siliceous fossil meals, including diatomite	2512.00.0000	<u>12–31–13</u> Free.

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: The amount of domestically produced diatomite sold or used by producers in 2013 increased 5% compared with that of 2012. Apparent domestic consumption increased 4% in 2013; exports increased by 6%. Filtration (including the purification of beer, liquors, and wine, and the cleansing of greases and oils) continued to be the largest end use for diatomite, also known as diatomaceous earth. Domestically, production of diatomite used as an absorbent was the next largest use. An important application for diatomite is the removal of microbial contaminants, such as bacteria, protozoa, and viruses in public water systems. Other applications for diatomite include filtration of human blood plasma, pharmaceutical processing, and use as a nontoxic insecticide.

World Mine Production and Reserves:

	Mine production		Reserves ³
	<u>2012</u>	<u>2013^e</u>	
United States ¹	735	770	250,000
Argentina	55	60	NA
China	420	420	110,000
Denmark ⁴ (processed)	338	325	NA
France	75	75	NA
Japan	100	100	NA
Mexico	85	85	NA
Peru	81	80	NA
Spain	50	50	NA
Other countries	<u>181</u>	<u>180</u>	<u>NA</u>
World total (rounded)	2,120	2,150	Large

World Resources: World resources of crude diatomite are adequate for the foreseeable future. Transportation costs will continue to determine the maximum economic distance most forms of diatomite may be shipped and still remain competitive with alternative materials.

Substitutes: Many materials can be substituted for diatomite. However, the unique properties of diatomite assure its continuing use in many applications. Expanded perlite and silica sand compete for filtration. Synthetic filters, notably ceramic, polymeric, or carbon membrane filters and filters made with cellulose fibers, are becoming competitive as filter media. Alternate filler materials include clay, ground limestone, ground mica, ground silica sand, perlite, talc, and vermiculite. For thermal insulation, materials such as various clays, exfoliated vermiculite, expanded perlite, mineral wool, and special brick can be used.

^eEstimated. E Net exporter. NA Not available.

¹Processed ore sold and used by producers.

²Defined as imports – exports + adjustments for Government and industry stock changes.

³[See Appendix C for resource/reserve definitions and information concerning data sources.](#)

⁴Includes sales of molar production.